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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,593	06/11/2007	Shigenobu Kishi	0388-062233	8725

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EXAMINER

JACOBSON, MICHELE LYNN

ART UNIT	PAPER NUMBER
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1782

MAIL DATE	DELIVERY MODE
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02/18/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/588,593	Applicant(s) KISHI ET AL.	
	Examiner MICHELE JACOBSON	Art Unit 1782	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-9 is/are pending in the application.
- 4a) Of the above claim(s) 5-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3 and 4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Examiner Notes

1. Any objections and/or rejections made in the previous action, and not repeated below, are hereby withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

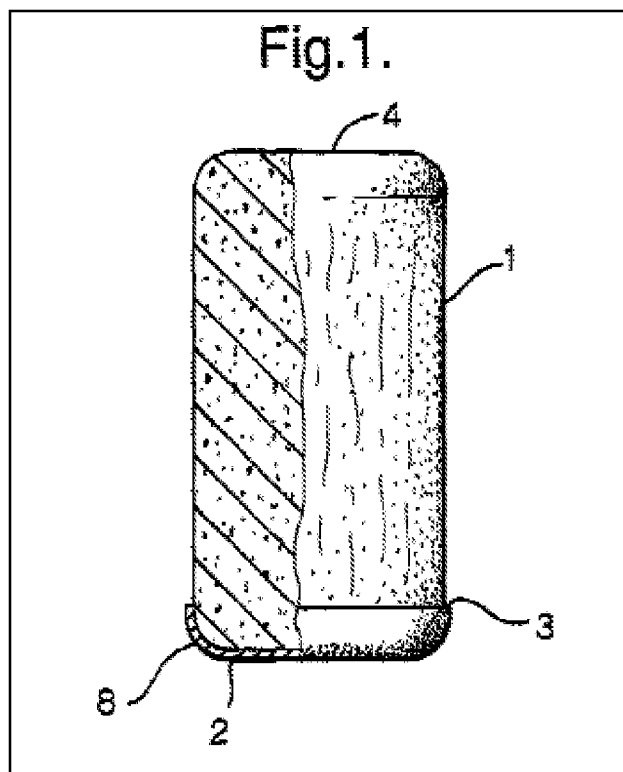
3. Claims 1, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakada et al. WO 2004/020300 (hereafter referred to as Nakada), U.S. Patent Application Publication No. 2006/0151424 relied on herein for translation and reference and Taylor WO 03/074379 (hereafter referred to as Taylor).
4. Nakada teaches a container stopper comprising a core formed of an elastic material and having a liquid-contact surface and an outer peripheral surface continuous

with the liquid-contact surface coated with a skin made of a synthetic resin, wherein said skin is a skin made of a polyester resin or a synthetic resin having a polyester resin as a main component thereof, and the skin is bonded to the liquid-contact surface and the outer peripheral surface of said core through a bonding layer. (Para. 10) The bonding layer is disclosed to be a polyethylene bonding layer. (Para. 17) The skin layer is disclosed to be PET. (Para. 16) In one embodiment of the invention, the polyethylene bonding layer is disclosed to comprise a polyethylene adhesive film and a polyethylene film. (Para. 53)

5. Nakada is silent regarding the polyethylene adhesive film being thicker in the region of the liquid contact surface than in the region of the outer peripheral surface.

6. Taylor teaches a stopper made of cork or plastic comprising a barrier layer which comprises hot melt polymeric adhesive such as polyethylene. (Pg. 5, 6, 10) The barrier layer preferably has thickness of from 0.075 to 50 μm . (Pg. 5) The barrier layer (8) may extend beyond the edge of the stopper by up to about 200 μm such that it forms a gasket with the inner wall of the receptacle. (Pg. 6-7, Fig. 1)

7. The barrier layer may also be a composite layer comprising at least one hot melt polymeric adhesive sub-layer



Art Unit: 1782

and at least one sub-layer having lower oxygen permeability than the hot melt adhesive.

(Pg. 8) Such lower permeability materials include polyethylene terephthalate (PET).

(Pg. 9) Where multiple sub-layers are present in the barrier layer, a hot melt adhesive sub-layer will preferably be located against the material of the stopper. (Pg. 8)

8. The barrier layer may be disposed within the body of the stopper underneath the lower permeability PET layer. (Pg. 8)

9. Both Nakada and Taylor are directed towards stoppers comprising synthetic materials for bottles. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have disposed a barrier layer comprising hot melt polyethylene adhesive as disclosed by Taylor underneath the PET layer disclosed by Nakada in order to increase the barrier property of the stopper in the region in contact with liquid. This obvious modification of Nakada would have resulted in a stopper comprising an exterior PET layer with a polyethylene hot melt adhesive layer as shown in Fig. 1 of Taylor by reference character (8) beneath it since Nakada requires the PET layer to be an exterior layer and Taylor teaches that the barrier layer may be disposed inside the body of the stopper. Since the barrier layer disclosed by Taylor is adhesive, one of ordinary skill in the art would have recognized that it could be disposed between the PET layer of Nakada and the polyethylene bonding layer of Nakada or beneath the polyethylene bonding layer of Nakada.

10. Regarding claim 1: The modification of Nakada with the teachings of Taylor would have produced a stopper comprising an exterior PET layer, a hot melt adhesive polyethylene barrier layer having a thickness of 0.075 to 50 μm that only extends up to

Art Unit: 1782

about 200 μm beyond the edge of the stopper and a polyethylene bonding layer. This structure reads on the structure of the stopper claimed in claim 1. This configuration would have provided the added benefit of increasing the barrier properties of the stopper of Nakada while requiring less expenditure for barrier materials since the barrier layer is not required to extend up the entire side of the stopper. While Nakada is silent regarding the thickness of the polyethylene bonding layer, this configuration would nonetheless produce a stopper in which the thickness of the polyethylene layers (both bonding and barrier) is 0.075 to 50 μm thicker in the liquid contact region of the stopper of Nakada than in the outer peripheral region of Nakada on the sides of the stopper because the polyethylene barrier layer would not extend up the sides of the stopper.

11. The examiner interprets the combination of the polyethylene bonding layer of Nakada and the polyethylene barrier layer of Taylor to read on the polyethylene bonding layer recited in claim 1. Therefore, in this configuration the thickness of the polyethylene bonding layer at the center of the liquid contact portion of the stopper would be 0.075 to 50 μm thicker than the thickness of the polyethylene bonding layer at the outer peripheral portion. This range of difference in thickness overlaps with the range claimed in claim 1. In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990)

12. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the thickness of the polyethylene bonding layer of

Art Unit: 1782

Nakada any thickness desired depending on the size of the stopper desired. No matter what the thickness of the polyethylene bonding layer of Nakada, the modification of Nakada with Taylor would always result in a stopper wherein the thickness of the polyethylene material in the liquid contact region is greater than the thickness of the polyethylene material on the outer periphery of the stopper. As such, the obvious optimization of the thickness of the polyethylene bonding layer of Nakada would have resulted in a polyethylene thickness in the liquid contact region and the outer peripheral region as claimed in claim 1. Therefore, the obvious modification of Nakada with Taylor would have produced the same invention as claimed in claim 1.

13. Regarding claim 3: The modification of Nakada with Taylor results in a stopper having two layers in the liquid contact surface region and one layer in the outer peripheral region.

14. Regarding claim 4: Taylor recites polyethylene terephthalate for the skin layer of the stopper disclosed. Therefore, the obvious modification of Nakada with Taylor would have resulted in a stopper as claimed in claim 4.

Response to Arguments

15. Applicant's arguments with respect to claims 1, 3 and 4 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHELE JACOBSON whose telephone number is (571)272-8905. The examiner can normally be reached on Monday-Thursday 8:30 AM-7 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571)272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1782

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michele L. Jacobson
Examiner /M. J./
Art Unit 1782

/Rena L. Dye/
Supervisory Patent Examiner, Art Unit 1782